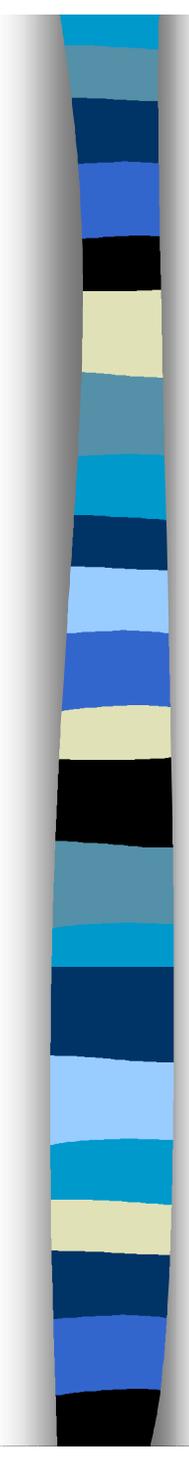


Frequently Asked Questions

- I hear that the type of scoring changed from 2001 to 2002. How and why?
 - From 1999 through 2001, “pattern scoring” was used. Starting in 2002, “number-correct scoring” is used.
 - Pattern scoring:
 - Yields more accurate student scores. The increase in accuracy is approximately a 15 - 20% increase in test length.
 - Takes into account not only the total number of points obtained, but also which questions the student got right and the characteristics of the items (e.g., discrimination, guessing level).

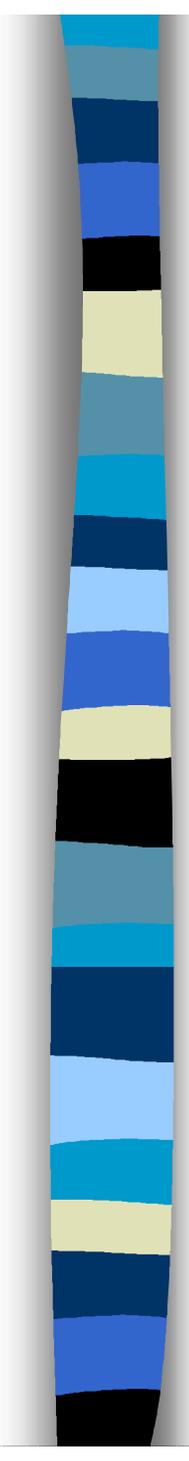


Frequently Asked Questions, cont.

[Type of scoring - cont.]

– Number-correct scoring:

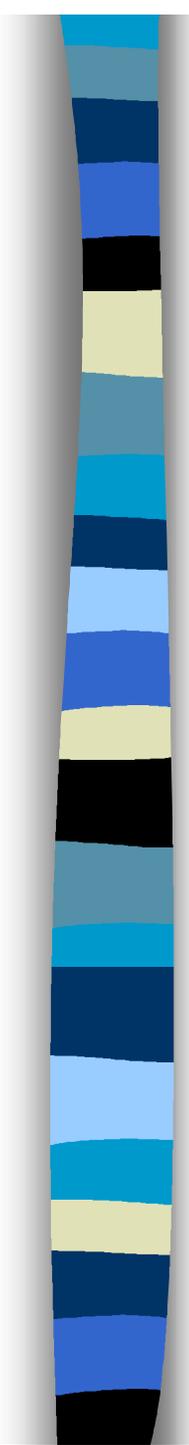
- Considers only how many questions a student answered correctly in determining his or her score.
- Allows for the conversion of raw scores to scale scores by districts and schools.
- Is more straightforward.
- Yields scores that are about the same as scores from pattern-scoring for groups of 25 or more students.



Frequently Asked Questions, cont.

■ How are the questions weighted?

- Pattern scoring uses optimal weights which differ from item to item and can depend on student ability. See section “IRT pattern-scoring” in Technical Reports for more about how item characteristics can affect scores.
- Number-correct scoring : One point on a multiple-choice (MC) item = one point on a constructed-response (CR) item. Student scale scores are based on unweighted raw scores.



Frequently Asked Questions, cont.

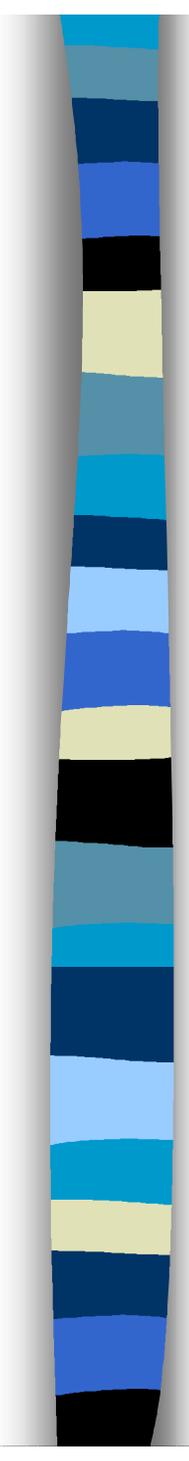
■ How do you use a raw-score-to-scale-score conversion table?

There is a one-on-one relationship between each raw score (RS) and a scale score (SS).

Here is the process for finding a SS for a given RS:

- (1) Sum up all the points that a student has earned on the test. Multiple-choice (MC) items that are correctly answered are worth 1 point each.

Points on constructed-response (CR) items can vary from item to item.



Frequently Asked Questions, cont.

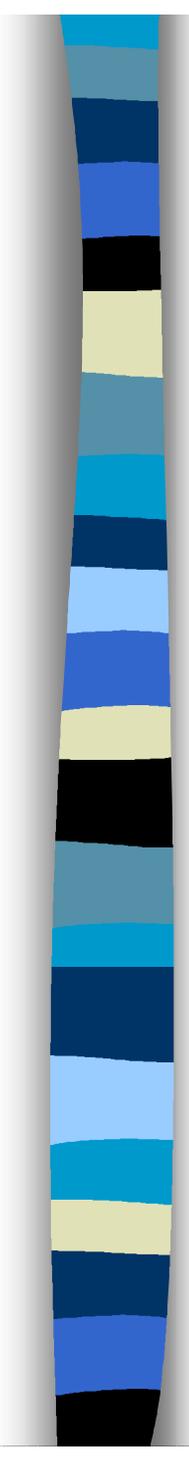
[RS-SS conversion table - cont.]

The maximum number of points available for a CR item is defined by the scoring rubric. The number of points that a response to a particular CR item is worth is the same as the score the response is given by the scorer, as defined by the scoring rubric.

Therefore, if a student gets 25 MC items right and scores 3, 2, 2, and 3 points on four CR items, his or her RS is $25 + 3 + 2 + 2 + 3 = 35$.

- (2) Go to the appropriate raw-score-to-scale-score (RS-SS) conversion table (Table 6* is an example). Find the RS in the left column, and

* Found at the end of this document.



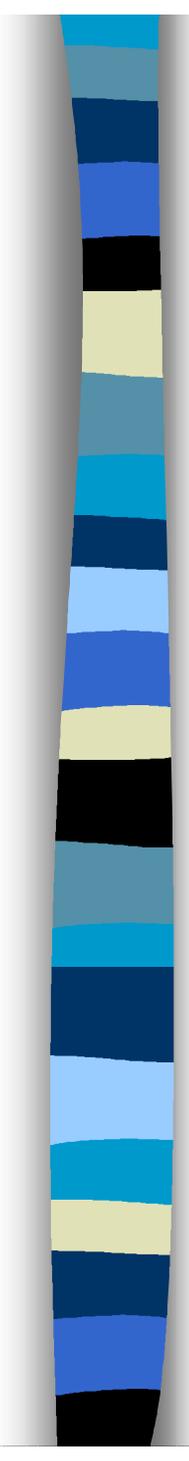
Frequently Asked Questions, cont.

[RS-SS conversion table - cont.]

go across the row to find the corresponding SS.
The SS is the student's scale score.

For the student with a RS of 35 points, the scale score would be 677.

- RS-SS tables change from year to year and from content / grade to content / grade, but the process of finding the right SS for a RS remains the same.



Frequently Asked Questions, cont.

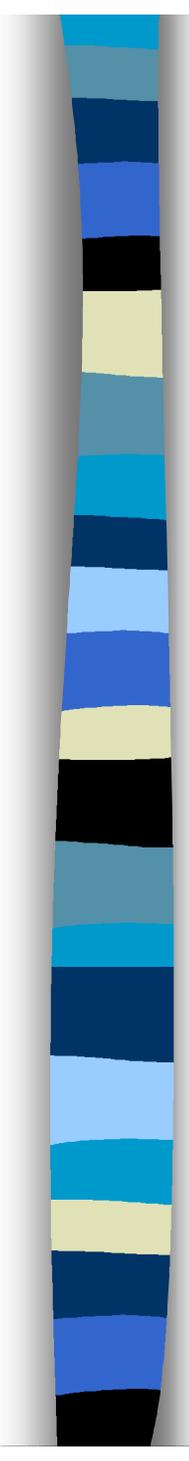
- How can we find the performance level for a scale score (SS)?

Use the appropriate section of the Scale-Score-to-Performance-Level (SS-PL) table (Table 7*) to determine the student's performance level (4, 3, 2, or 1).

* Found at the end of this document.

If the student has a SS of 677 in Grade 4 ELA, the student is in Performance Level of 3.

The SS-PL table does not change from year to year, unless there is a change in the test administration date.



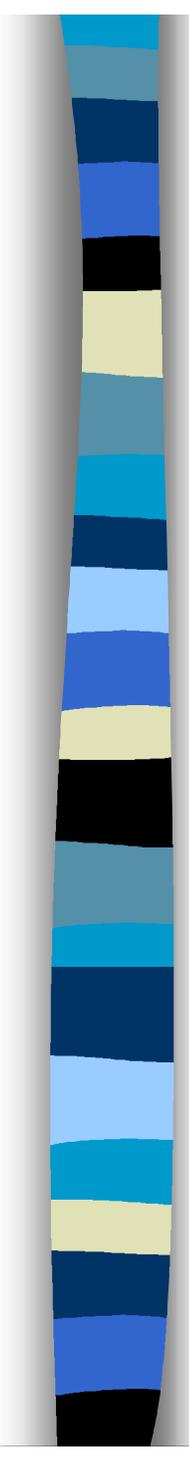
Frequently Asked Questions, cont.

- Will the NYS Grades 4 and 8 RS-SS tables be posted on the Office of State Assessment (OSA) website?

Yes, beginning in 2003. However, there are a few cautions about using the RS-SS and SS-PL tables.

Caution:

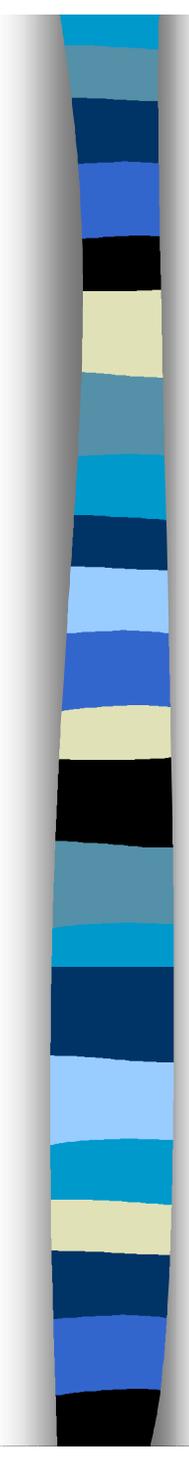
- (a) If a RS is wrong, a SS will be wrong even if the correct RS-SS table is used.
- (b) If a wrong RS-SS table is used, a SS will be wrong even if the correct RS and the correct process are used.



Frequently Asked Questions, cont.

[Caution - cont.]

- (c) If the test administration date changes, the relevant section of the SS-PL table will change, because the amount of learning time has also changed. In 2003, the administration date for Grade 8 ELA will move from March to mid-January, and the SS-PL table will be updated accordingly.



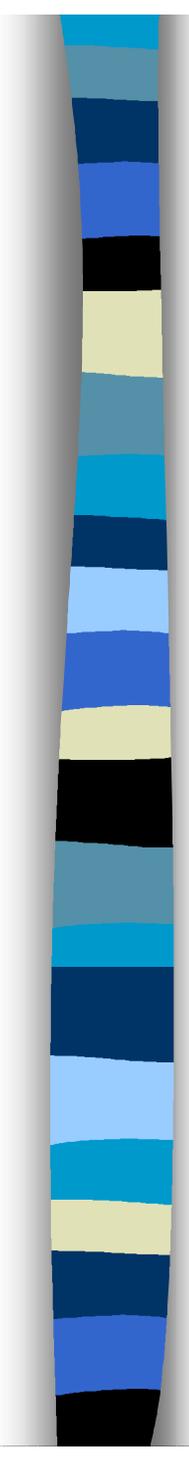
Frequently Asked Questions, cont.

- Is “number-correct scoring” the same as “percent number-correct” or “national percentile”?

They refer to different concepts.

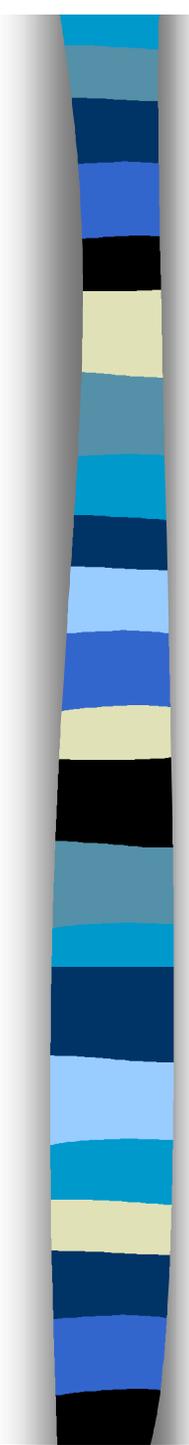
Number-correct scoring is one of scoring methods to derive student ability estimates (e.g., scale scores). It is directly based on raw scores, aka, number-correct scores, hence the name “number-correct scoring.”

Percent number-correct is a raw score expressed in percentage. For example, if a student’s raw score is 25 out of 30 points possible, his/her percent number-correct is $25 / 30 \times 100 = 83\%$.



Frequently Asked Questions, cont.

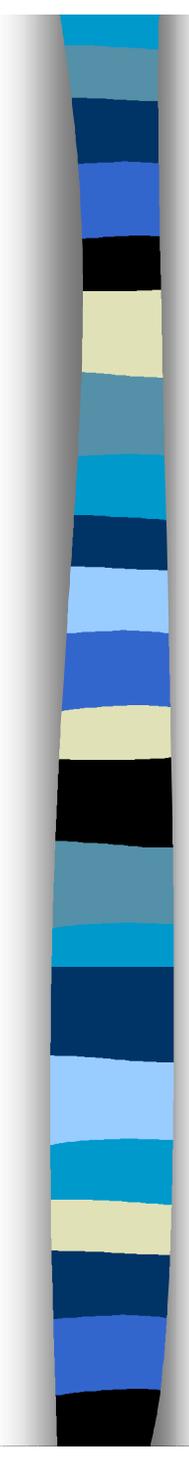
National percentile (NP) is a normative score obtained from a standardized test, a score that describes a student's relative standing as compared with a representative national norm group. If a student's score on a standardized test is at the 80th percentile, it means that the student's score is higher than the scores of 80% of students in the national norm group.



Frequently Asked Questions, cont.

- Does the state keep track of which items were most frequently missed statewide?

Yes, in the form of item difficulties. One common measure of item difficulty is the “p-value.” When multiplied by 100, the p-value signifies the percentage of students who responded correctly to the item (MC), or the mean score divided by the maximum number of score points (CR). P-values are reported in annual technical reports. The proportion of students who missed the item is $(1 - p\text{-value})$.

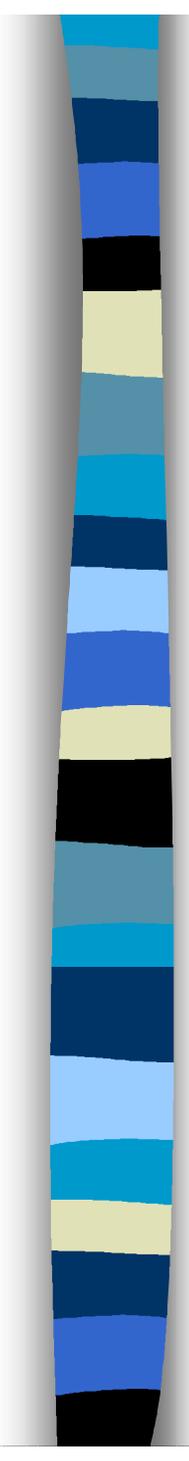


Frequently Asked Questions, cont.

- Is there any evidence that the testing time is sufficient?

The state has been following the percentage of omitted responses on each item (omit %). The omit %s, provided in Tables 1 - 4*, are generally smaller than 5%. When the highest omit % is less than 5%, at least 95% of students have completed all items.

* Found at the end of this document.



Frequently Asked Questions, cont.

■ How can I get technical reports?

The 2001 Technical Reports are posted on the Web:

<http://www.emsc.nysed.gov/ciai/assess.html>

under the category, “Publications.”

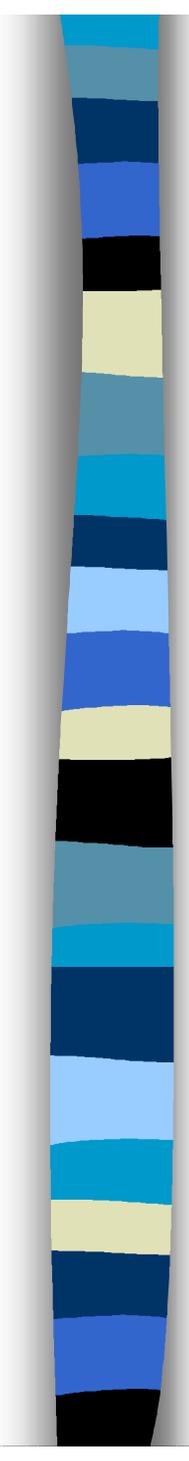
The approximate schedule for posting the 2002 Technical Reports is as follows:

Grade 4 ELA : Mid-February, 2003

Grade 8 ELA : Mid-February, 2003

Grade 4 Math : Early June, 2003

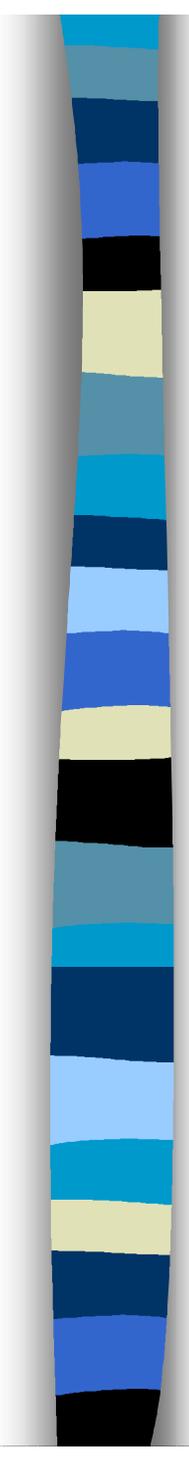
Grade 8 Math : Early June, 2003



Frequently Asked Questions, cont.

[Technical reports - cont.]

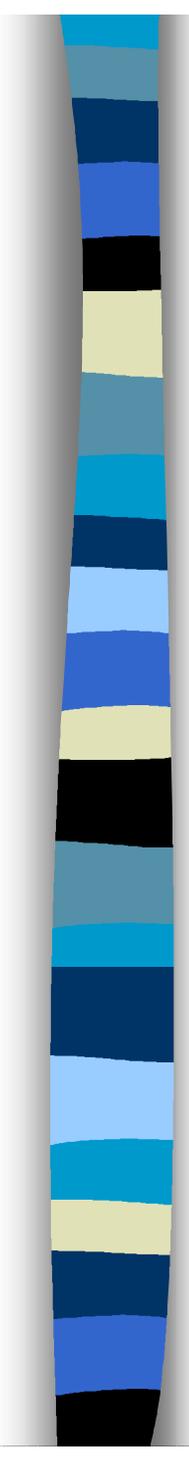
Starting with the 2003 technical reports, each technical report will be posted in approximately eight months after the test administration.



Frequently Asked Questions, cont.

- An educator wrote: “I did some analyses on Grade 4 ELA, and they showed that a score of 20 on the MC items (71% correct) and a score of 9 on the CR items (64% correct) were associated with reaching Level 3 or 4.”

This makes sense, because the MC items tend to be easier than the CR items. With the same amount of knowledge and skills, one would typically get proportionately more points on MC items than on CR items.

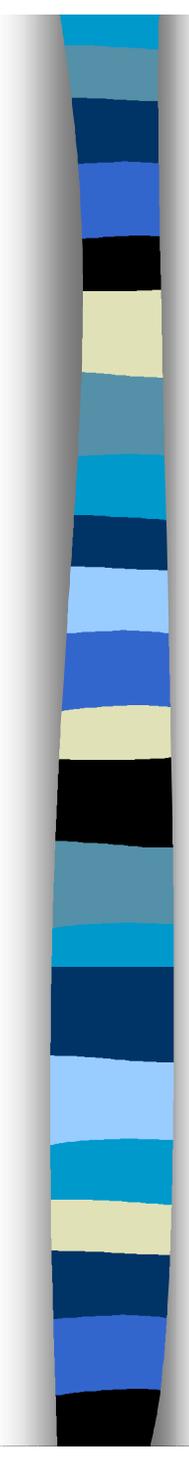


Frequently Asked Questions, cont.

- If a student guesses on an item, will the student be penalized?

The NYS Grades 4 and 8 programs do not deduct points for items answered incorrectly from a total number of points earned.

With number-correct scoring, one point is one point, regardless of how it is earned.



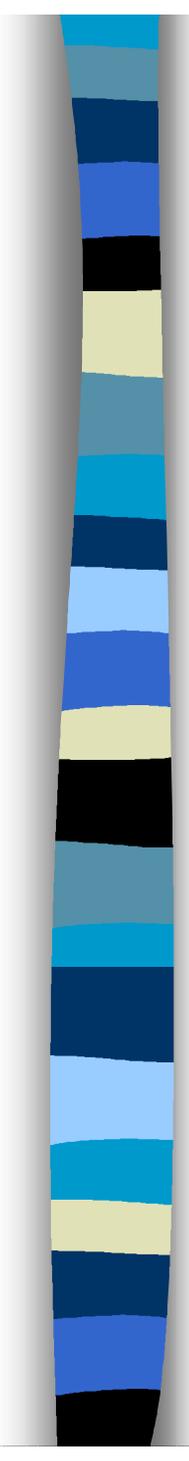
Frequently Asked Questions, cont.

- Can we compare this year's SPIs against, say, last year's?

No. SPIs are like raw scores and cannot be compared across forms. That is why annual technical reports provide SPI scores expected for the cut scores.

These expected SPIs can be thought of as “performance standards on the standards / key ideas,” as opposed to the familiar “performance standards on the whole test.” They can be used as reference points in interpreting student SPIs. The 2001 expected SPIs are provided in Table 5*.

* Found at the end of this document.

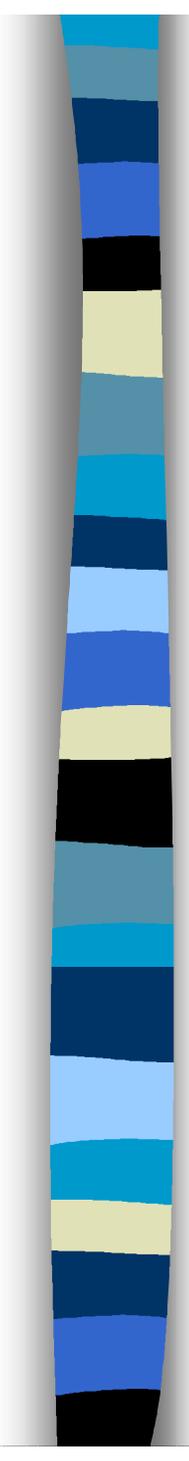


Frequently Asked Questions, cont.

[SPIs - cont.]

For example, if a student's SPI scores on the 2001 Grade 4 ELA test are 80, 70, and 85, a reasonable interpretation is that the student is performing at the Level-3 level on Standard 1, at the Level-2 level on Standard 2, and at the Level-4 level on Standard 3.

Beginning in 2003, the annual expected SPIs will be posted on the OSA website around the time when the score reports arrive at schools.



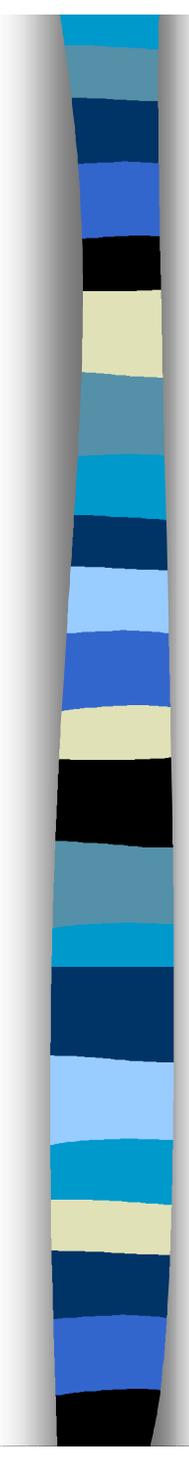
Frequently Asked Questions, cont.

- Have you looked at how local and regional scoring may differ?

Data from a 10% audit has been analyzed for three types of schools:

- (a) New York City public schools,
- (b) Public schools outside of New York City, and
- (c) Non-public schools.

For the 10% audit, approximately 10% of student papers are pulled after the operational administration and scored by scorers from Measurement Inc. Then, the teachers' scores



Frequently Asked Questions, cont.

are compared against Measurement Inc.'s scores. The results from the analyses have been included in annual technical reports.

NYSED recognizes the interest and need for a comparison of regional and local scoring procedures and will be conducting comparisons. Results will be published on the OSA website.

Table 1. New York State Grade 4 English Language Arts
Percentages of Students who Omitted the Item

Item	Item type	1999	2000	2001	2002
1	MC ¹	0.00%	0.09%	0.03%	
2	MC ¹	0.00%	0.01%	0.04%	
3	MC ¹	0.15%	0.04%	0.06%	
4	MC ¹	0.05%	0.01%	0.03%	
5	MC ¹	0.05%	0.04%	0.06%	
6	MC ¹	0.00%	0.09%	0.06%	
7	MC ¹	0.05%	2.75%	0.07%	
8	MC ¹	0.05%	0.09%	0.03%	
9	MC ¹	0.10%	0.09%	0.06%	
10	MC ¹	0.20%	0.07%	0.04%	
11	MC ¹	0.25%	0.07%	0.07%	
12	MC ¹	0.15%	0.03%	0.06%	
13	MC ¹	0.15%	0.11%	0.11%	
14	MC ¹	0.10%	0.09%	0.11%	
15	MC ¹	0.30%	0.14%	0.16%	
16	MC ¹	0.25%	0.14%	0.14%	
17	MC ¹	0.60%	0.24%	0.14%	
18	MC ¹	0.70%	0.19%	1.53%	
19	MC ¹	0.80%	0.19%	0.36%	
20	MC ¹	0.85%	0.20%	0.26%	
21	MC ¹	0.95%	0.43%	0.33%	
22	MC ¹	2.29%	0.22%	0.33%	
23	MC ¹	2.49%	0.44%	0.45%	
24	MC ¹	2.59%	0.72%	0.53%	
25	MC ¹	3.34%	0.73%	0.62%	
26	MC ¹	3.78%	0.86%	0.67%	
27	MC ¹	4.03%	0.98%	0.87%	
28	MC ¹	4.43%	1.00%	0.91%	
29	CR ²	0.90%	0.06%	0.04%	
30	CR ²	1.29%	0.28%	0.25%	
31	CR ²	1.84%	0.13%	0.08%	
32	CR ²	1.59%	0.11%	0.04%	

¹ The omit %s for MC items are based on a random sample:
N = 2,008, 6,971 & 7,041 for 1999 - 2001.

² The omit %s for the CR items are based on a state
dataset.

Table 2. New York State Grade 8 English Language Arts
Percentages of Students who Omitted the Item

Item	Item type	1999	2000	2001	2002
1	MC ¹	0.13%	0.00%	0.04%	
2	MC ¹	0.07%	0.10%	0.03%	
3	MC ¹	0.13%	0.14%	0.03%	
4	MC ¹	0.08%	0.03%	0.07%	
5	MC ¹	0.18%	0.16%	0.17%	
6	MC ¹	0.03%	0.10%	0.03%	
7	MC ¹	0.08%	0.17%	0.07%	
8	MC ¹	0.21%	0.10%	0.09%	
9	MC ¹	0.11%	0.10%	0.09%	
10	MC ¹	0.10%	0.13%	0.00%	
11	MC ¹	0.13%	0.16%	0.03%	
12	MC ¹	0.16%	0.16%	0.00%	
13	MC ¹	0.20%	0.17%	0.07%	
14	MC ¹	0.17%	0.19%	0.07%	
15	MC ¹	0.25%	0.14%	0.16%	
16	MC ¹	0.45%	0.17%	0.17%	
17	MC ¹	0.40%	0.49%	0.13%	
18	MC ¹	0.51%	0.33%	0.14%	
19	MC ¹	0.62%	0.43%	0.24%	
20	MC ¹	0.59%	0.40%	0.26%	
21	MC ¹	0.72%	0.53%	0.55%	
22	MC ¹	0.95%	0.56%	0.60%	
23	MC ¹	1.09%	0.64%	0.62%	
24	MC ¹	1.36%	0.74%	0.81%	
25	MC ¹	1.37%	0.81%	0.85%	
26	CR ²	1.59%	0.04%	0.00%	
27	CR ²	1.44%	0.20%	0.16%	
28	CR ²	3.30%	1.35%	1.85%	
29	CR ²	1.45%	0.16%	0.23%	

¹ The omit %s for MC items are based on a random sample:
N = 7,059, 6,917, & 6,947 for 1999 - 2001.

² The omit %s for the CR items are based on a state
dataset.

Table 3. New York State Grade 4 Mathematics
Percentages of Students who Omitted the Item

Item	Item type	1999	2000	2001	2002
1	MC ¹	0.52%	0.07%	0.10%	
2	MC ¹	0.54%	0.08%	0.07%	
3	MC ¹	0.62%	0.14%	0.06%	
4	MC ¹	0.52%	0.13%	0.17%	
5	MC ¹	1.03%	0.14%	0.11%	
6	MC ¹	0.88%	0.07%	0.10%	
7	MC ¹	0.64%	0.08%	0.13%	
8	MC ¹	0.62%	0.10%	0.09%	
9	MC ¹	0.61%	0.04%	0.10%	
10	MC ¹	0.61%	0.06%	0.17%	
11	MC ¹	0.55%	0.15%	0.11%	
12	MC ¹	0.54%	0.15%	0.04%	
13	MC ¹	0.64%	0.20%	0.11%	
14	MC ¹	0.64%	0.11%	0.17%	
15	MC ¹	0.61%	0.13%	0.16%	
16	MC ¹	0.65%	0.14%	0.11%	
17	MC ¹	0.58%	0.31%	0.16%	
18	MC ¹	0.68%	0.23%	0.24%	
19	MC ¹	0.62%	0.15%	0.24%	
20	MC ¹	0.65%	0.27%	0.63%	
21	MC ¹	0.66%	0.44%	0.24%	
22	MC ¹	0.93%	0.31%	0.60%	
23	MC ¹	0.81%	0.35%	0.50%	
24	MC ¹	1.03%	0.46%	0.63%	
25	MC ¹	0.89%	0.53%	0.54%	
26	MC ¹	1.03%	0.62%	0.82%	
27	MC ¹	1.10%	0.87%	0.73%	
28	MC ¹	1.15%	0.84%	0.96%	
29	MC ¹	1.47%	0.84%	1.13%	
30	MC ¹	1.88%	1.08%	1.35%	
31	CR ²	0.65%	0.33%	0.15%	
32	CR ²	0.64%	0.13%	0.17%	
33	CR ²	0.59%	0.25%	0.07%	
34	CR ²	0.80%	0.26%	0.18%	
35	CR ²	0.79%	0.15%	0.15%	
36	CR ²	1.22%	0.21%	0.12%	
37	CR ²	0.99%	0.65%	0.20%	
38	CR ²	0.83%	0.17%	0.34%	
39	CR ²	2.25%	0.29%	0.31%	
40	CR ²	1.93%	0.10%	0.13%	
41	CR ²	2.28%	0.26%	0.18%	
42	CR ²	2.11%	0.76%	0.15%	
43	CR ²	2.14%	0.28%	0.29%	
44	CR ²	2.69%	0.14%	0.33%	
45	CR ²	2.67%	0.87%	0.31%	
46	CR ²	2.04%	0.43%	0.41%	
47	CR ²	2.26%	0.34%	1.43%	
48	CR ²	2.44%	0.38%	1.36%	

¹ The omit %s for MC items are based on a random sample:

N = 7,072, 7,106, & 6,978 for 1999 - 2001.

² The omit %s for the CR items are based on a state dataset.

Table 4. New York State Grade 8 Mathematics
Percentages of Students who Omitted the Item

Item	Item type	1999	2000	2001	2002
1	MC ¹	0.77%	0.12%	0.07%	
2	MC ¹	0.93%	0.66%	0.11%	
3	MC ¹	0.70%	0.14%	0.73%	
4	MC ¹	1.07%	0.12%	0.18%	
5	MC ¹	0.82%	0.26%	0.38%	
6	MC ¹	0.72%	0.16%	0.18%	
7	MC ¹	0.74%	0.17%	0.31%	
8	MC ¹	0.77%	0.04%	0.35%	
9	MC ¹	0.70%	0.06%	0.18%	
10	MC ¹	0.70%	0.30%	0.13%	
11	MC ¹	0.89%	0.22%	0.24%	
12	MC ¹	0.76%	0.12%	0.14%	
13	MC ¹	0.87%	0.50%	0.28%	
14	MC ¹	0.85%	0.09%	0.13%	
15	MC ¹	0.79%	0.23%	0.25%	
16	MC ¹	1.16%	0.36%	0.27%	
17	MC ¹	0.90%	0.29%	0.51%	
18	MC ¹	1.30%	0.59%	0.45%	
19	MC ¹	0.93%	0.76%	0.58%	
20	MC ¹	1.28%	0.65%	0.38%	
21	MC ¹	1.26%	0.66%	0.89%	
22	MC ¹	1.40%	0.96%	1.16%	
23	MC ¹	1.86%	1.01%	1.30%	
24	MC ¹	1.83%	1.28%	1.65%	
25	MC ¹	1.85%	1.74%	1.94%	
26	MC ¹	2.22%	1.55%	2.78%	
27	MC ¹	2.22%	1.55%	2.40%	
28	CR ²	3.32%	1.59%	0.76%	
29	CR ²	2.24%	3.48%	6.03%	
30	CR ²	2.90%	1.64%	0.35%	
31	CR ²	4.56%	2.39%	0.93%	
32	CR ²	3.74%	1.28%	2.28%	
33	CR ²	5.16%	2.68%	3.01%	
34	CR ²	4.00%	3.98%	7.83%	
35	CR ²	2.93%	2.95%	2.58%	
36	CR ²	12.20%	1.39%	6.13%	
37	CR ²	5.65%	0.82%	1.52%	
38	CR ²	5.51%	1.00%	2.11%	
39	CR ²	7.28%	4.19%	0.81%	
40	CR ²	7.43%	0.77%	2.70%	
41	CR ²	8.64%	4.98%	4.24%	
42	CR ²	5.60%	4.69%	2.86%	
43	CR ²	5.42%	2.25%	3.91%	
44	CR ²	11.91%	3.30%	3.65%	
45	CR ²	12.27%	2.32%	3.33%	

¹ The omit %s for MC items are based on a random sample:
N = 6,980, 6,952, & 7,079 for 1999 - 2001.

² The omit %s for the CR items are based on a state
dataset.

Table 5.
 New York State Grades 4 and 8 English Language Arts and
 Mathematics
 Expected SPI Scores at Each of the Cut Points

2001 Grade 4 English Language Arts

Standard	Level 2 (SS=603)	Level 3 (SS=645)	Level 4 (SS=692)
1	53	75	91
2	59	76	89
3	43	63	83

2001 Grade 8 English Language Arts

Standard	Level 2 (SS=662)	Level 3 (SS=701)	Level 4 (SS=739)
1	57	77	90
2	74	89	96
3	45	70	87

2001 Grade 4 Mathematics

Key Idea	Level 2 (SS=602)	Level 3 (SS=637)	Level 4 (SS=678)
1	34	55	78
2	41	65	86
3	39	70	92
4	52	76	92
5	42	61	78
6	41	65	88
7	48	70	88

2001 Grade 8 Mathematics

Key Idea	Level 2 (SS=681)	Level 3 (SS=716)	Level 4 (SS=760)
1	49	64	83
2	25	51	85
3	40	59	85
4	34	58	85
5	40	64	90
6	46	75	93
7	42	70	91

Table 6.
An Example of a Raw-Score-to-Scale-Score Table

<u>RS</u>	<u>SS</u>
0	455
1	455
2	455
3	455
4	455
5	455
6	504
7	530
8	545
9	556
10	565
11	572
12	578
13	584
14	589
15	594
16	598
17	602
18	606
19	610
20	613
21	617
22	620
23	623
24	627
25	630
26	634
27	637
28	641
29	645
30	649
31	654
32	658
33	664
34	670
35	677
36	686
37	697
38	710
39	727
40	749
41	784
<u>42</u>	<u>800</u>

Table 7.
New York State Grades 4 and 8
English Language Arts and Mathematics
Scale-Score-to-Performance-Level Table

Scale Score Range		Performance
Lowest SS	Highest SS	Level
Grade 4 ELA		
692	800	4
645	691	3
603	644	2
455	602	1
Grade 8 ELA (2002)*		
738	830	4
699	737	3
660	698	2
527	659	1
Grade 4 Math		
678	810	4
637	677	3
602	636	2
448	601	1
Grade 8 Math		
760	882	4
716	759	3
681	715	2
517	680	1

* This section of the table will change in 2003, because of the change in test administration date from March to January.